TECHNICAL NOTES

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TECHNICAL NOTE
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"AN EARLY DEVELOPING HAIRY VETCH FOR COVER CROP USE"

Prepared by
Charles M Owsley *
Malcome Kirkland *
Sue Roach *

Introduction

Earlier in this century legume cover crops were in wide use. Farmers utilized various legumes for green manure crops throughout the Southeastern United States because they provided excellent cover for the reduction of soil erosion and produced valuable nitrogen for subsequent crops. With the availability of cheap commercial fertilizers, the use of legumes for green manure crops declined. However, agricultural scientists have again begun to do extensive work with cool season legumes as cover crops in conservation tillage systems.

Much of the beneficial nitrogen produced by these legumes is assimilated by the time the cool season legumes flower. Therefore, it would be advantageous to develop various legume cultivars that display the early developing characteristics, since this would allow for more flexibility in conservation tillage systems. With this in mind, in 1994 the SCS Americus Plant Materials Center and the Auburn University, Alabama Experiment Stations released an early developing hairy vetch called 'Au Early Cover'.

By mid February, when commercial hairy vetch has little growth, 'AU Early Cover' can have 150 to 200 pounds per acre of dry matter, therefore it can be utilized for conservation tillage earlier than commercial hairy vetch. This should produce enough ground cover for early plantings of conservation tillage systems. When this cultivar is harvested or incorporated about April 1, it has a dry matter yield of approximately 1500 pounds per acre.

The cultivar also flowers 20 to 30 days earlier than the later developing hairy vetch (approximately the first week of April in Central Alabama and the Americus, Georgia area). In the upper Southern Coastal Plain it matures seed from mid-May to early June.

Area of Adaptation

The cultivar is adapted to the central and southern part of Alabama and Georgia. Preliminary reports indicate that this cultivar can grow north to Kentucky and Northern Mississippi and west to the Kingsville, Texas area. Further comparison testing will be done before the complete useful range of this cultivar is determined.

Establishment

'AU Early Cover' can be broadcast or drilled. For maximum cool season coverage, 30 pounds of inoculated seed per acre is recommended. Plant in the fall, it is usually planted around October 15 at Americus, Georgia (upper Southern Coastal Plain). In North Alabama it is planted from September 1 to October 15. In South Alabama it is planted from September 15 to November 1. Prior to planting, apply lime to raise pH to 6.0. Apply fertilizer as indicated by recent soil test results. Planting depth should be from 1/2" - 1". Establishment in test and increase plots did not require use of a herbicide to enhance the vetch stand.

Management

When it is time to kill the cover crop for conservation tillage planting, experience at Americus indicates that use of a systemic herbicide produces better results than a contact herbicide. Approximately two weeks after spraying, the cover crop should be dried sufficiently for proper summer crop planting.

Disease and Insects

This cultivar does not have any particular resistance to disease or insects beyond those commonly found in the species. The Americus PMC applies an insecticide at 75% bloom and again two weeks later to control vetch weevil infestation in seed production fields.

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Commercial Seed Production

'AU Early Cover' can be harvested by direct combining. In Americus, Georgia this is usually done from mid April-mid May. Normal yields are approximately 300 - 400 pounds of seed per acre. At Americus the following combine settings were utilized on a F-2 Gleaner: Concave setting 1/2" and greater, cylinder speed 500 - 600 rpm, fan setting of 5, run in second gear at full throttle.

Availability

Auburn University and Alabama Crop Improvement Association are working with interested companies to secure rights to the new cultivar. Breeder seed stocks will be maintained by Americus Plant Materials Center and the Alabama Crop Improvement Association.

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*Plant Materials Center Manager, Assistant Manager and Biological Science Technician, Americus, Georgia, respectively.